

PATENT APPLICATION
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No: Q93454

Piet VANNESTE, et al.

Appln. No.: 10/595,139

Group Art Unit: 1796

Confirmation No.: 3291

Examiner: Helen Lee Pezzuto

Filed: March 3, 2006

For: PROCESS FOR THE PREPARATION OF (METH) ACRYLATE DI-AMMONIUM
SALTS AND THEIR USE AS MONOMERS FOR THE SYNTHESIS OF POLYMERS

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This responds to the Restriction Requirement set forth in the Office Action dated
February 25, 2009.

In response to the Restriction Requirement, Applicant elects Group I, drawn to a process
for the manufacturing of a (meth)acrylate diammonium salt, for examination. Applicants note
that a Preliminary Amendment is being submitted concurrently herewith, so the process claims
therein corresponding to elected Group I should be examined.

With respect the non-elected claims, Applicants respectfully request rejoinder of non-
elected claims depending on an allowable elected claim per MPEP 821.04(a).

Also, Applicants make the above election with traverse, as follows.

Applicants submit that the Group II claims, which are drawn to a process for the manufacturing of a polymer, relate to basically the same invention as the first group of claims, since the invention is situated in the production of the monomer whilst the production of the polymer only involves one additional step, namely the polymerisation of the monomer.

Applicants note that the amended set of claims contains substantially the same claims as the corresponding European patent which has now been allowed by the European Examiner (see the copy of the "Druckexemplar" attached to the Preliminary Amendment being submitted concurrently herewith). The main difference is that in claim 1 of the European patent application the solvent has been defined more into detail as being an organic aprotic dipolar solvent.

For the European patent application, Applicants had the same objections as to the unity of invention. The group I and group II inventions could however be maintained in the same application by amending claim 2 so that it refers to claim 1 and so that it only defines an additional polymerisation step. Also, the group III invention could be maintained in the application, but only as a dependent invention (see claim 33, corresponding to previous claim 9), the independent claim 17 for this invention having been deleted.

Therefore, Applicants submit that they should be allowed to maintain the claims of the group II (in particular, claim 9, now claim 33) which are dependent from the first group also in the present patent application.

For the European patent application, Applicants submitted the following to demonstrate that the group I and the group II claims relate to the same invention:

"As to the first two inventions, namely the inventions relating to the monomer (claim 1) and the polymer (claim 2), we have replaced the portion of claim 2 which repeated all of the features of claim 1 by a reference to the process of claim 1. In this way, it is immediately clear that the process of claim 2 involves the same special technical features as the process of claim 1.

In this respect, we have noted that in the International Preliminary Examination Report the Examiner acknowledges the novelty and the inventive step of the process of claim 1 for manufacturing the monomer (i.e. the (meth)acrylate di-ammonium salt of formula (I)). The problem underlying the invention is to provide an improved process for the preparation of the (meth)acrylate di-ammonium salt of formula (I) which contains less of the undesired (meth)acrylate mono-ammonium salt of formula (V). This is achieved by selecting the solvent wherein the reaction is carried out in such a manner that the solubility of the (meth)acrylate di-ammonium salt of formula (I) is less than 0.5 g/100 g of solvent whilst the solubility of the undesired (meth)acrylate mono-ammonium salt of formula (V) is at least 20 g/100 g of solvent. In this way, the solid reaction product removed from the solvent comprises, per mole of the compound of formula (I), less than 0.1 mole of the compound of formula (V).

This special technical feature of claim 1 distinguishes not only the process of claim 1 from the closest prior art but also the process of claim 2 for manufacturing the polymer. In fact, the process of claim 2 includes the process of claim 1 and comprises only one further step, namely the step of polymerising the monomer contained in the solid product obtained by the process of claim 1. This further polymerisation step is also known from the closest prior art so that the process of claim 2 is distinguished by exactly the same special technical features from

the closest prior art as the process of claim 1, namely by the nature of the solvent used to carry out the quaternisation reaction and by the way wherein the monomer (the (meth)acrylate di-ammonium salt of formula (I)) is removed from this solvent, namely without dissolving it in water. Consequently, since the inventions of claims 1 and 2 involve the same special technical features we consider there is no lack of unity between these two inventions.

The solid monomer product of claim 14 and polymer of claim 15 are characterised by the process by which they are obtained. The solid monomer product of claim 14 can further be considered as an intermediate product obtained in the process of claim 2. Since the solid monomer product incorporates an essential structural element into the polymer and since the polymer is manufactured directly from the solid monomer product, we consider claims 14 and 15 also do not lack unity of invention.

When the process and product claims do not lack unity, we consider that the use of the polymer claimed in claim 23 also does not lack unity."

Favorable consideration of the above is respectfully requested.

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Respectfully submitted,

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Date: May 27, 2009



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